

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/021678 A2

(51) International Patent Classification⁷: **C09K 11/06**,
C08F 212/32

(21) International Application Number:
PCT/JP2004/012771

(22) International Filing Date: 27 August 2004 (27.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-306711 29 August 2003 (29.08.2003) JP
60/499,706 4 September 2003 (04.09.2003) US

(71) Applicant (for all designated States except US): **SHOWA DENKO K.K.** [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KOYAMA, Tamami** [JP/JP]; c/o Corporate R & D Center, Showa Denko K.K., 1-1, Ohnodai 1-chome, Midori-ku, Chiba-shi, Chiba 267-0056 (JP). **IGARASHI, Takeshi** [JP/JP]; c/o Corporate R & D Center, Showa Denko K.K., 1-1, Ohnodai 1-chome, Midori-ku, Chiba-shi, Chiba 267-0056 (JP). **KONDOH, Kunio** [JP/JP]; c/o Corporate R & D Center, Showa Denko K.K., 1-1, Ohnodai 1-chome, Midori-ku, Chiba-shi, Chiba 267-0056 (JP). **TAGUCHI, Isamu** [JP/JP]; c/o Corporate R & D Center, Showa Denko K.K., 1-1, Ohnodai 1-chome,

Midori-ku, Chiba-shi, Chiba 267-0056 (JP). **MONDEN, Ryuji** [JP/JP]; c/o Corporate R & D Center, Showa Denko K.K., 1-1, Ohnodai 1-chome, Midori-ku, Chiba-shi, Chiba 267-0056 (JP).

(74) Agent: **OHIE, Kunihiisa**; Ohie Patent Office, Selva-Ningyocho 6F, 14-16, Nihonbashi-Ningyocho 2-chome, Chuo-ku, Tokyo 103-0013 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

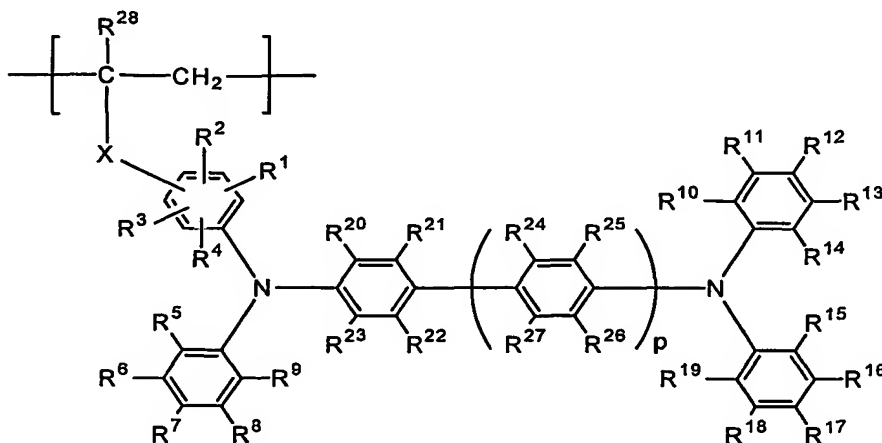
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: PHOSPHORESCENT POLYMER COMPOUND AND ORGANIC LIGHT EMITTING DEVICE USING THE SAME



(1)

(57) Abstract: The present invention relates to a phosphorescent polymer compound comprising a phosphorescent monomer unit and a hole transporting monomer unit having a triphenylamine structure represented by the formula (1): (in the formula, the symbols have the same meanings as defined in the Description), and an organic light emitting device using the compound. Use of the phosphorescent polymer compound of the present invention enables production of organic light emitting device with a high light emitting efficiency at a low voltage, which is suitable for increasing the emission area and mass production.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.